

JC17 Rec'd PCT/PTO 01 JUN 2005

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Original) A method for removing leukocytes comprising causing a leukocyte-containing liquid to pass through a leukocyte removal filter comprising nonwoven fabric having an average fiber diameter of 0.3 to 3.0  $\mu\text{m}$  to remove leukocytes from the leukocyte-containing liquid and to obtain a leukocyte-free liquid, and further comprising using nonwoven fabric having a formation index  $y$  of 50 or less corresponding to a thickness of 0.3 mm .

2. (Original) The method for removing leukocytes according to claim 1, wherein the nonwoven fabric has a filling rate of 0.05 to 0.30.

3. (Currently Amended) The method for removing leukocytes according to claim 1-~~or~~2, wherein the nonwoven fabric has a formation index  $y$  of 50 or less corresponding to a thickness of 0.3 mm, and  $y$  satisfies the following inequality.

$$y < -4 \times \text{average fiber diameter of nonwoven fabric } (\mu\text{m}) + 55$$

4. (Currently Amended) The method for removing leukocytes according to claim 1 ~~any of claims 1 to 3~~, wherein the nonwoven fabric is obtained by using a melt-blown method.

5. (Currently Amended) The method for removing leukocytes according to claim 1 ~~any of claims 1 to 4~~, comprising: using a leukocyte removal filter comprising a filter for removing aggregate upstream of the nonwoven fabric ~~according to any of claims 1 to 4~~ and/or a post-filter downstream of the nonwoven fabric.

6. (Currently Amended) The method for removing leukocytes according to claim 1 ~~any of claims 1 to 5~~, wherein the leukocyte removal filter is a flat filter having an inlet and an outlet for liquid.

7. (Currently Amended) The method for removing leukocytes according to claim 1 ~~any of claims 1 to 5~~, wherein the leukocyte removal filter is a cylindrical filter having an inlet and an outlet for liquid.

8. (Original) The method for removing leukocytes according to claim 6, wherein a container of the leukocyte removal filter is formed of a flexible resin.

9. (Currently Amended) The method for removing leukocytes according to claim 1 ~~any of claims 1 to 8~~, comprising: causing the leukocyte-containing liquid selected from whole blood, red cell concentrate, platelet concentrate, platelet rich plasma, and platelet poor plasma to pass through the leukocyte removal filter.

10. (Currently Amended) The method for removing leukocytes according to claim 1 ~~any of claims 1 to 9~~, comprising: causing the leukocyte-containing liquid to pass through the leukocyte removal filter by utilizing head drop.

11. (Currently Amended) The method for removing leukocytes according to claim 1 ~~any of claims 1 to 9~~, comprising: causing the leukocyte-containing liquid to pass through the leukocyte removal filter by increasing pressure of the inlet side of the leukocyte removal filter and/or reducing pressure of the outlet side of the leukocyte removal filter.

12. (Currently Amended) The method for removing leukocytes according to claim 1 ~~any of claims 1 to 8 and 11~~, comprising: performing extracorporeal circulation by continuously collecting whole blood from a body of a patient, causing the collected whole blood to pass through the leukocyte removal filter, and returning the leukocyte-free whole blood to the body of the patient.

13. (Original) Use of a leukocyte removal filter having a formation index  $y$  of 50 or less corresponding to a thickness of 0.3 mm for a leukocyte removal method comprising removing leukocytes from a leukocyte-containing liquid by using a leukocyte removal filter comprising nonwoven fabric having an average fiber diameter of 0.3 to 3.0  $\mu\text{m}$ .

14. (Original) The use of a leukocyte removal filter according to claim 13, wherein the nonwoven fabric has a filling rate of 0.05 to 0.30.

15. (Currently Amended) The use of a leukocyte removal filter according to claim 13 or 14, wherein the nonwoven fabric has a formation index  $y$  of 50 or less corresponding to a thickness of 0.3 mm, and  $y$  satisfies the following inequality.

$$y < -4 \times \text{average fiber diameter of nonwoven fabric } (\mu\text{m}) + 55$$

16. (Currently Amended) The use of a leukocyte removal filter according to claim 13 ~~any of claims 13 to 15~~, wherein the nonwoven fabric is obtained by using a melt-blown method.

17. (Currently Amended) The use of a leukocyte removal filter according to claim 13 ~~any of claims 13 to 16~~, wherein the leukocyte removal filter comprises a filter for removing aggregate upstream of the

nonwoven fabric according to any of claims 13 to 16 and/or a post-filter downstream of the nonwoven fabric.

18. (Currently Amended) The use of a leukocyte removal filter according to claim 13 ~~any of claims 13 to 17~~, wherein the leukocyte removal filter is a flat filter having an inlet and an outlet for liquid.

19. (Currently Amended) The use of a leukocyte removal filter according to claim 13 ~~any of claims 13 to 17~~, wherein the leukocyte removal filter is a cylindrical filter having an inlet and an outlet for liquid.

20. (Original) The use of a leukocyte removal filter according to claim 18, wherein a container of the leukocyte removal filter is formed of a flexible resin.

21. (Currently Amended) The use of a leukocyte removal filter according to claim 13 ~~any of claims 13 to 20~~, for removing leukocytes from the leukocyte-containing liquid selected from whole blood, red cell concentrate, platelet concentrate, platelet rich plasma, and platelet poor plasma.

22. (Currently Amended) The use of a leukocyte removal filter according to claim 13 ~~any of claims 13 to 21~~, for causing the leukocyte-

containing liquid to pass through the leukocyte removal filter by utilizing head drop.

23. (Currently Amended) The use of a leukocyte removal filter according to claim 13 ~~any of claims 13 to 21~~, for causing the leukocyte-containing liquid to pass through the leukocyte removal filter by increasing pressure of the inlet side of the leukocyte removal filter and/or reducing pressure of the outlet side of the leukocyte removal filter.

24. (Currently Amended) The use of a leukocyte removal filter according to claim 13 ~~any of claims 13 to 20 and 23~~, for continuously collecting whole blood from a body of a patient and causing the collected whole blood to pass through the leukocyte removal filter.

25. (Original) A leukocyte removal filter for a leukocyte removal method for removing leukocytes from a leukocyte-containing liquid, comprising: nonwoven fabric having an average fiber diameter of 0.3 to 3.0  $\mu\text{m}$  and a formation index  $\gamma$  of 50 or less corresponding to a thickness of 0.3 mm.

26. (Original) The leukocyte removal filter according to claim 25, wherein the nonwoven fabric has a filling rate of 0.05 to 0.30.

27. (Currently Amended) The leukocyte removal filter according to claim 25 ~~or 26~~, wherein the nonwoven fabric has a formation index  $y$  of 50 or less corresponding to a thickness of 0.3 mm, and  $y$  satisfies the following inequality.

$$y < -4 \times \text{average fiber diameter of nonwoven fabric } (\mu\text{m}) + 55$$

28. (Currently Amended) The leukocyte removal filter according to claim 25 ~~any of claims 25 to 27~~, wherein the nonwoven fabric is obtained by using a melt-blown method.

29. (Currently Amended) A leukocyte removal filter, comprising: a filter for removing aggregate upstream of the nonwoven fabric according to claim 25 ~~any of claims 25 to 28~~ and/or a post-filter downstream of the nonwoven fabric.

30. (Currently Amended) The leukocyte removal filter according to claim 25 ~~any of claims 25 to 29~~, comprising a flat filter having an inlet and an outlet for liquid.

31. (Currently Amended) The leukocyte removal filter according to claim 25 ~~any of claims 25 to 29~~, comprising a cylindrical filter having an inlet and an outlet for liquid.

32. (Original) The leukocyte removal filter according to claim 30, wherein a container of the filter is formed of a flexible resin.

33. (Currently Amended) The leukocyte removal filter according to claim 25 ~~any of claims 25 to 32~~, wherein the leukocyte removal filter is used to remove leukocytes from the leukocyte-containing liquid selected from whole blood, red cell concentrate, platelet concentrate, platelet rich plasma, and platelet poor plasma.

34. (Currently Amended) A blood extracorporeal circulation device for blood, comprising: at least the leukocyte removal filter according to claim 25 ~~any of claims 25 to 33~~.

35. (Currently Amended) A blood extracorporeal circulation device for blood, comprising at least: the leukocyte removal filter according to claim 25 ~~any of claims 25 to 33~~; an inlet for introducing whole blood collected from a body of a patient into the leukocyte removal filter; and an outlet for returning the leukocyte-free whole blood to the body of the patient.